

February 25, 1983

Dear Customer,

Enclosed you'll find a version 2.0 ROM for your ATR8000. This ROM has added new features to the ATR8000 along with some improvements. This ROM has been shipped to you free of charge. All we ask is that you return your old ROM so that we can keep you on our Customer Update List.

New ROM features:

- 1) The 2.0 ROM is compatible with ATARI disks that are copy-protected or otherwise specially formatted. For example, programs like GORF, CANYON CLIMBER and FILE MANAGER 800 didn't work properly under older ROMS. They run normally with the 2.0 ROM.
- 2) The 2.0 ROM contains an automatic printer buffer for ATARI DOS and OS/A+ printing operations. 64k ATR8000s have a printer buffer of 48k. 16k ATR8000s have a 4k printer buffer. Disk initializing is the only disk operation that cannot be done while the printer is running; it uses too much memory.

The printer buffer only works for printers connected directly to the ATR8000 at either the parallel PRINTER port or the RS-232 port.

- 3) J11 has been defined. This jumper option is used for ATARI DOS and OS/A+ to tell the ATR8000 that an 850 is connected to the system. When J11 is active, the ATR8000's printer ports are disabled, so it is not necessary to run PRINTOFF.BAS before printing. [If an 850 is connected to the system, it is still necessary to connect the printer to the 850 rather than the ATR8000.]

850 users have the option of connecting J11 in place of running PRINTOFF.BAS before printing. It is also possible for 850 users to not engage this option and to run PRINTOFF.BAS to disable the ATR8000's printer port before printing. Remember that as long as J11 is active, the printer ports of the ATR8000 are inactive, just as they are when PRINTOFF.BAS is run.

An 850 cannot be connected to the system during CP/M operation. The condition of J11 does not affect CP/M operation.

When possible it is best to disconnect the 850 and to directly connect a printer to the ATR8000 so you can have the benefit of the printer buffer.

- 4) This new ROM has better ATARI DOS and OS/A+ skew selection, resulting in faster disk operation.

- 5) The drive time out has been improved. Under older ROMs, if you removed a disk from a drive before the drive timed out (the drive light went out), then the drive would not time out unless a disk was reinserted in the drive and the operation was completed.

With the 2.0 ROM, the drive will time out if a disk is removed from a drive before the drive timed out.

- 6) To use PRINTOFF.BAS or PRINTON.BAS with this new ROM, you need to change Line 190 of these programs to read:

190 DATA 90,1,83,0,0,0,1,0,3,0,56,255

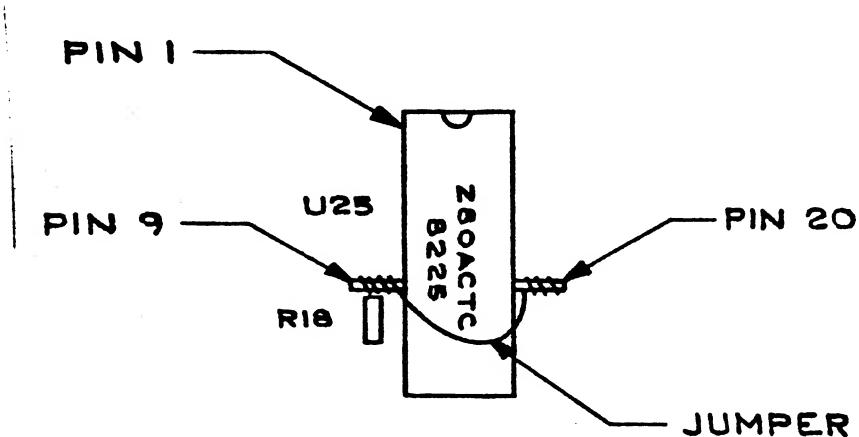
- 7) The 2.0 ROM will run flipped over disks with no index holes (we do not recommend this practice). It will also run hard sector disks that have been reformatted with a soft sector format.
- 8) We have implemented an abort timer on the CTC that eliminates possible disk controller lockup situations. To do this alteration, follow one of these two procedures. (If your unit was shipped with a 2.0 ROM, ignore this item.) We recommend the first procedure.

For both procedures:

Locate U25 on the ATR8000 circuit board. This is the Z80A CTC, a socketed 28-pin part.

Procedure #1:

Remove the Z80A CTC chip from the socket. This can be done by gently prying it out of the socket using a small flat blade screwdriver. The diagram below shows this chip.



Find Pins 9 and 20 on the chip. Use the diagram for reference. Bend these pins' leads straight out to the sides as shown. Using the small piece of 30 gauge wire (from SWP), connect these two pins together as shown. It

is best to solder the wire ends to the pin leads. If you do not have access to a soldering iron, then carefully wrap the ends of the wire around the leads, making several loops around each lead.

Put the chip back in the socket, making sure to replace it so that it is oriented as it was before (i.e., Pin 1 is in the proper location).

Procedure #2:

Remove the screws in the ATR8000's enclosure so that the circuit board will separate from the box. Find U25 on the back side of the circuit board and solder a wire between Pins 9 and 20 of U25 (the Z80A CTC). Replace the screws.

- 9) The 2.0 ROM's global variables are different than the variables for previous ROM versions. The new global variable listing is enclosed. Use it in place of the listing in the ATR8000 manual.
- 10) (If your unit was shipped with the 2.0 ROM, this patch has already been done for you.) CP/M users: You need to patch the DDINIT.COM program. The 2.0 ROM causes the disk timer to run out of time and to lockup during the DDINIT program. To reset the disk timer so that it won't "die" during formatting, do the following:

#1 Boot CP/M and put a disk with DDT.COM and DDINIT.COM into Drive A.

#2 From the CP/M prompt type: DDT DDINIT.COM<return>

#3 DDT will respond with its signon message and prompt (-).
Type: A477<return>

#4 Type: CALL BCO<return>

#5 Type: .<return>

#6 The DDT prompt, -, is now showing. Type: ABCO<return>

#7 Type: DI<return>

#8 Type: MVI A,3<return>

#9 Type: OUT 83<return>

#10 Type: EI<return>

#11 Type: JMP 8DB<return>

#12 Type: .<RETURN>

#13 Type: <CTRL><C>

#14 You are now at the CP/M prompt (A>). Type:

SAVE 12 DDINIT.COM<return>

DDINIT is now patched. Test DDINIT by verifying that the 2.0 ROM is in the ATR8000 and running DDINIT. If it will format a disk without timing out, it is correctly patched. Replace all of your copies of DDINIT with this patched version.

Now that the 2.0 ROM is complete, we are concentrating our efforts to complete the CP/M programs MODEM7, DISKDEF and CONFIGUR. We'll let you know when they are done.

Please return your old ROM to SWP with your name and address before March 15, 1983. Users who do not return the old ROMS will be dropped from the Customer Update List.